Recovery Plan Action Status

Plan Name: Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area

Plan Status: Final Plan Date: 30-Sep-98 Lead Agency: USFWS

Lead Office: Sacramento Fish And Wildlife Office 414-6600)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Bay checkerspot butterfly (Euphydryas editha bayensis), Tiburon mariposa lily (Calochortus iiburonensis), Metcalf Canyon ewelflower (Streptanthus albidus ssp. albidus), Pennell's bird's-beak (Cordylanthus elenuis ssp. capillaris), San Mateo woolly sunflower (Eriophyllum atilobum), Coyote ceanothus (Ceanothus (Ceanothus (Ceanothus ierrisae), White-rayed pentachaeta (Pentachaeta bellidiflora), Presidio clarkia (Cirsium fontinale var. fontinale), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum), Tiburon jewelflower (Streptanthus niger), San Mateo thornmint (Acanthomintha obovata ssp. dudtonii), Santa Clara Valley dudleya (Dudleya (Dudleya (Dudleya (Dudleya (Dudleya (Dudleya (Streptanthus dudleya (Dudleya (Dudleya (Streptanthus dudleya (Dudleya (Dudleya (Dudleya (Streptanthus dudleya (Dudleya (Dudleya (Streptanthus dudleya (S	2	1.1	Establish cooperative programs with participants from the public and private sector	Ongoing Not Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, California Department of Fish and Game	Other: Information and Education	Internal Technical Assistance	Cooperative program established with Stuart Weiss and San Mateo Parks for reintroduction of Bay Checkerspot into Edgewood Park.

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Bay checkerspot butterfly	2	1.2.1	Develop and implement outreach	Not Started			U.S. Fish and Wildlife Service	Other: Information and Education	Internal Technical Assistance	
(Euphydryas editha			plans				Wildille Service	and Education	Assistance	
bayensis), Tiburon			piaris							
mariposa lily										
(Calochortus										
tiburonensis), Metcalf Canyon										
ivietcair Canyon										
jewelflower										
(Streptanthus										
albidus ssp.										
albidus), Pennell's										
bird's-beak										
(Cordylanthus										
tenuis ssp.										
capillaris), San										
Mateo woolly										
sunflower										
(Eriophyllum										
latilobum), Coyote										
ceanothus										
(Ceanothus										
ferrisae), White-										
rayed pentachaeta										
(Pentachaeta										
bellidiflora),										
Presidio clarkia										
(Clarkia										
franciscana),										
Fountain thistle										
(Cirsium fontinale										
var. fontinale),										
Tiburon paintbrush										
(Castilleja affinis										
ssp. neglecta),										
Marin dwarf-flax										
(Hesperolinon										
congestum),										
Tiburon jewelflower										
(Streptanthus										
niger), San Mateo										
thornmint										
(Acanthomintha										
obovata ssp.										
duttonii), Santa										
Clara Valley										
dudleya (Dudleya										
setchellii)		1						1	1	

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(Acanthomintha obovata ssp. duttonii), Santa Clara Valley dudleya (Dudleya setchellii)										

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Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum)	1	2.1.3	Secure and protect serpentine habitat in Golden Gate National Recreation Area for multiple species	Ongoing Not Current	FY 1995 - FY 1999		National Park Service, U.S. Fish and Wildlife Service	Acquisition: Management Agreement	Internal Field Assistance	
Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum), Tiburon jewelflower (Streptanthus niger)	1	2.1.5	Secure and protect serpentine habitat on Tiburon Peninsula Middle Ridge (Marin County) for multiple species	Not Started			City of Tiburon, California, Marin County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	
Tiburon mariposa lily (Calochortus tiburonensis), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum)	1	2.1.6	Secure and protect serpentine habitat on Ring Mountain (Marin County) for multiple species	Not Started			Marin County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	
Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum), Tiburon jewelflower (Streptanthus niger)	1	2.1.7	Secure and protect serpentine habitat in St. Hilary's area (including Harroman Property) for multiple species	Not Started			Tiburon Landmark Society, Marin County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	

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Bay checkerspot	1	3.1	Develop and	Ongoing Current	FY 1995 - FY 1999		California	Management:	Internal Field	Staff from
butterfly			implement				Department of	General	Assistance	Creekside Center
(Euphydryas editha			appropriate				Parks and			for Earth
bayensis), Tiburon			management				Recreation,			Observation
mariposa lily			actions at multiple				California			working with Santa
(Calochortus			sites, for multiple				Department of			Clara Open Space
tiburonensis),			species				Transportation, City			Authority to
Metcalf Canyon			3,700.00				of San Jose,			develop new
jewelflower							California, City of			monitoring protocol
(Streptanthus							Tiburon, California,			for Dudleya
albidus ssp.							East Bay Regional			setchellii.
albidus), Pennell's							Park District, Marin			Sotorionii.
bird's-beak							County Open			Invasive plants are
(Cordylanthus							Space District,			being removed
tenuis ssp.							Marin Municipal			from Cirsium
capillaris), San							Water District,			fontinale var.
Mateo woolly							Midpeninsula			fontinale
sunflower							Regional Open			populations at
(Eriophyllum							Space District,			Stulsaft Park and
latilobum), Coyote							Rancho Santa Ana			CalTrans property
ceanothus							Botanic Garden,			near Woodside
(Ceanothus							San Francisco			Glens.
ferrisae), White-							Water Department,			
rayed pentachaeta							Tiburon Landmark			
(Pentachaeta							Society, University			
bellidiflora),							of California at			
Presidio clarkia							Berkeley, San			
(Clarkia							Mateo County,			
franciscana),							California,			
Fountain thistle							Stanislaus County,			
(Cirsium fontinale							California, Marin			
var. fontinale),							County, California,			
Tiburon paintbrush							San Francisco			
(Castilleja affinis							County, California,			
ssp. neglecta),							Santa Clara			
Marin dwarf-flax							County, California,			
(Hesperolinon							Contra Costa			
congestum),							County, California,			
Tiburon jewelflower							Alameda County,			
(Streptanthus					1		California, Sonoma			
niger), San Mateo							County, California,			
thornmint							National Park			
(Acanthomintha							Service, U.S. Fish			
l '					1		and Wildlife			
obovata ssp.										
duttonii), Santa							Service, California			
Clara Valley							Department of Fish			
dudleya (Dudleya							and Game, Private			
setchellii)	1	1				l	landowners	1		

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Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum)	2	4.2.11	Conduct surveys in historic and potential habitat at Golden Gate National Recreation Area (Marin County) for multiple species	Ongoing Current	FY 1995 - FY 1999		National Park Service, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	Some monitoring occurs under Recovery Permit

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Tiburon mariposa lily (Calochortus tiburonensis), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum), Tiburon jewelflower (Streptanthus niger)	2	4.2.18	Conduct surveys in historic and potential habitat on Tiburon Peninsula (Marin County) for multiple species	Not Started			City of Tiburon, California, Marin County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Coyote ceanothus (Ceanothus ferrisae), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Santa Clara Valley dudleya (Dudleya setchellii)	1	4.2.33	Survey historic and potential habitat at Coyote Ridge area (Santa Clara county) for multiple species	Partially Complete	FY 2005		Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Research: Population Surveys	Graduate Student	2005-Transition Zone between S. Albidus and Albidus and S. Albidus peramoenus mapped. 2005-2006- Comprehensive mapping of Dudleya on selected mitigation parcels (100oc) completed-more mapping planned elsewhere. 2006-C. Affinis neglecta pops mapped in detail. 135 plants at southern pops about 1000 plants in northern canyon on 0.25 ac. Annual survey of Bay Area Checkerspot Butterfly. Conducted at UTC, Kirby Canyon, and Young Ranch.
Tiburon paintbrush (Castilleja affinis ssp. neglecta)	2	4.2.35	Conduct surveys in historic and potential habitat in Henry Coe State Park (Santa Clara County) for multiple species	Not Started			California Department of Parks and Recreation, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	Finite area of serpentine to be searched

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Coyote ceanothus (Ceanothus ferrisae), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Santa Clara Valley dudleya (Dudleya setchellii)	2	4.2.38	Conduct surveys in historic and potential habitat North of Llagas Avenue (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Tiburon paintbrush (Castilleja affinis ssp. neglecta), Santa Clara Valley dudleya (Dudleya setchellii)	2	4.2.40	Conduct surveys in historic and potential habitat in Palm Avenue / Kalana Hills area (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Tiburon paintbrush (Castilleja affinis ssp. neglecta), Tiburon jewelflower (Streptanthus niger)	2	5.11	Conduct necessary research at Middle Ridge, Tiburon Peninsula (Marin county) for multiple species	Not Started			City of Tiburon, California, Marin County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Management Techniques	Graduate Student	
Tiburon mariposa lily (Calochortus tiburonensis), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum)	1	5.12	Conduct necessary research at Ring Mountain (Marin County) for multiple species	Not Started			Marin County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Management Techniques	Graduate Student	
Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum), Tiburon jewelflower (Streptanthus niger)	2	5.13	Conduct necessary research at St. Hilary's area (includes Harroman Property), Tiburon Peninsula (Marin County) for multiple species	Not Started			City of Tiburon, California, Marin County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Demographic Studies	Graduate Student	
Tiburon paintbrush (Castilleja affinis ssp. neglecta)	3	5.14	Conduct necessary research at American Canyon (Napa County) for Castilleja affinis neglecta	Not Started			U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Demographic Studies	Graduate Student	

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Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Coyote ceanothus (Ceanothus ferrisae), Fountain thistle (Cirsium fontinale var. fontinale), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Santa Clara Valley dudleya (Dudleya setchellii)	1	5.25	Conduct surveys in historic and potential habitat near Niles (alameda County) for Streptanthus albidus peramoenus	Not Started			U.S. Fish and Wildlife Service	Research: Habitat Status	Graduate Student	

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Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum)	2	5.8	Conduct necessary research at Golden Gate National Recreation Area (Marin County) for multiple species	Not Started			National Park Service, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Management Techniques	Graduate Student	